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ABSTRACT

A writing instructor whose assignment was to put into place a writing across the curriculum (WAC) project at the University of Wisconsin at Milwaukee's engineering college quickly found that this would be a difficult task, especially the prompting of a student-centered writing intensive pedagogy. The undertaking was broken into two steps: the first component involved bringing the engineering faculty together to create discipline-specific writing standards which shared basic notions about the qualities of competent writing, while the second component focused on less concrete goals--real change needed an intensive WAC program which could "get at the discipline from the inside out." A team teaching experience was not a success for several reasons: there was too much difference in professional rank on the team; the faculty member the instructor was collaborating with was not really focused on the same issues; and that faculty member perceived writing as an add-on, not as an actual part of the course. The root of the failure was the clash between the subtle disciplinary hierarchies unconsciously adopted, which leads to a "cross-disciplinary" approach to WAC programs. Successful WAC programs strive instead for interdisciplinarity, established by close collaboration between disciplines which produces a high level of content integration and mutual integration of organizing concepts and methodologies. (CR)

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Teaching to Learn: WAC, Composition, and Engineering Classrooms

Cross-disciplinary: James R. Davis argues that this term "refers to efforts to view one discipline from the perspective of another, often subordinating the phenomena from one discipline to the other" (4). Davis notes that there is usually "little effort to integrate and no intent to *generate a new subject or paradigm*" in cross-disciplinary work (4). ***Multidisciplinary:*** For Davis, "multidisciplinary" is a term which signifies "several disciplinary specialists working side by side in an additive way" (4). Crucially, Davis points out that this aggregate of specialists (or team) would most likely "not spend much effort or feel the necessity to integrate their 'disciplinary' perspectives" (4). ***Transdisciplinary:*** The term "transdisciplinary," according to Davis, "suggests themes or issues that transcend or cross over several disciplines" (4). Such themes or issues, in Davis's view, "go beyond the domains of particular disciplines and their methods" (4) ***Interdisciplinary:*** Of all of these various terms, Davis argues that "interdisciplinary" indicates the most significant integration and collaboration between disciplines. For instance, Davis uses the term "interdisciplinary" to "refer to the work that scholars do together in two or more disciplines, subdisciplines, or professions, by bringing together and to some extent synthesizing their perspectives" (5). Davis argues that interdisciplinary courses "involve efforts, at least to some degree, to bring about mutual integration of organizing concepts and methodologies" (5)

I'm going to start out by telling you about the paper I was going to present today, and then I'll talk about why I decided to do something different.[1] The first paper I wrote for this conference was a case study which analyzed what I went through last year, when, like three other members of this panel, I was part of the University of Wisconsin-Milwaukee's Writing Across the Curriculum project. As the consultant to the College of Engineering and Applied Science (CEAS), my job, as I understood it, was to train CEAS faculty in writing to learn strategies, to provide guidance and advice to CEAS faculty who wanted to make their existing syllabi more writing intensive, and to somehow prompt as much student-centered, writing intensive pedagogy in CEAS as possible. I quickly found out that this last goal would be a difficult task, because for many reasons--including things like on-going conflicts over general education writing requirements, as well as the threat of forced change in the traditional pedagogies a lot of the faculty were comfortable with--the faculty of CEAS were in general rather hostile to any imposition of writing to learn pedagogy.[2] It seemed logical then to break up this huge

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undertaking into two basic steps: the first component involved bringing CEAS faculty together to create discipline-specific writing standards (or rubrics) for the college which shared basic notions about the qualities of competent writing with the minimum General Education writing requirements at UWM, so that we could establish some common ground from which to discuss and develop writing to learn pedagogy in the discipline. This was really the easy part, and I was able to meet my goal here by surveying CEAS faculty about the writing requirements in their courses, and then working with CEAS to condense, synthesize, and articulate the responses.

The second part of my approach focused on my other goals which, while more important to long-term results, were perhaps less concrete. Again, I wanted to generate some kind of a dynamic conversation among CEAS faculty about writing-intensive, student-centered pedagogy--a conversation which up to that point simply had never taken place. I understood from the outset that this goal could be addressed in part by faculty workshops, but I also came to realize that the effect of faculty workshops might be remarkably short lived at CEAS. As I said, there was a great deal of resistance to WAC in CEAS, resistance which, according to Ellen Strenski, is not at all unusual in a research institution. Strenski argues that while faculty resistance is common at all colleges and universities, it is "especially acute at a research university where the problem of available time is compounded by an epistemology ... that values the accumulation and broadcasting of 'facts'" (35). I suspect this problem may be even more severe in the sciences, than in the humanities.

I know I certainly had not been at CEAS long before I realized that real change would not take place there without an intensive WAC program which could somehow get at the discipline from the inside out, so to speak--something that faculty workshops seemed to be too brief in

duration to do. Also, it appeared that one source of resistance for faculty in CEAS was their concern about the applicability of the very general pedagogical strategies WAC workshops offered to their own, very specific and often unique course and classroom requirements. I thought that the only way to successfully enhance the writing requirements of an existing course would be to actually be a part of that course--to see the daily pedagogical problems, and to be there to shape and mold writing-to-learn strategies to fit an individual course. I concluded that team teaching, in particular, teams made up of a CEAS faculty member and a compositionist, could get at many of the problems I faced in CEAS and would help me to reach some of my goals for lasting change.

At the time, I expected that this kind of a team teaching program would allow us--and here I was specifically thinking of compositionists as 'us'--to observe and assess the writing needs of students in the discipline so that we could best "engineer" more writing intensive courses for CEAS faculty; hence the last term in my title. The best way to gather the information necessary, as McCarthy and Walvoord have noted, is to try to understand what and how students are actually thinking in the classroom. They've argued that the only way that we can not only really know what our students are thinking, but "understand how [our] newly learned teaching strategies influence that thinking is through close observation of [our] students" (78). Lucille Parkinson McCarthy and Barbara E. Walvoord call the "systemic investigation" of our classrooms an essential component of the "second stage" of a WAC program: the research phase which seeks to articulate, analyze, and sustain the energy and enthusiasm for change created by WAC workshops. Moreover, McCarthy and Walvoord note that "constructing knowledge in interaction is both the central activity of the research process and, at the same time, the object of research" (79).

I decided to test my theories about team teaching myself, and so I collaborated with a fairly enthusiastic CEAS faculty member on a team teaching project in Mechanical Engineering. It was also at just this time that I sat down to begin writing the paper I originally intended to present today, that is, when the project was first beginning, and thus before it had failed. That first paper argued with confidence for a team teaching component in all WAC programs--an argument that would be supported, of course, by my own 'exemplary' case study. But I've always ended up learning much more from my failures than I ever did from my successes, and one thing I have learned from my experience with team teaching is that I was right to be confident. My present paper argues just as enthusiastically for team teaching, although from a less naive standpoint, that is, after considerable thought and reflection about exactly what went wrong.

Several things seem clear to me now: first, there was far too much difference in professional rank between the full professor I worked with and my own status as a graduate student and TA. McCarthy and Walvoord note that successful collaborations often occur between "two equal-status professionals agreeing to explore answers to questions they both cared a great deal about" (81). This observation about the kind of team that McCarthy and Walvoord call a "focused pair" leads me to identify a second source of trouble in my own experiment in team teaching: the fact that the faculty member I was collaborating with and I, although we were both enthusiastic about the project, were not really focused on the same questions or issues. I was seeking to "engineer" or redesign his course as a writing intensive course, and he was trying to find a way to "fit" writing into the course as it had already been conceived. This difference in focus was itself a third problem, and a direct result of the fact that we perceived the importance of writing in the course differently. As I saw it, writing was a significant part of the actual content of

the course, while my colleague viewed writing instruction as an *add-on*, or to use Sirocski's words, "as a necessarily remedial tune-up" for his students which took time away from teaching the "real" content of the course. And these problems only aggravated what Davis has observed are normal problems with faculty teams. For instance, when faculty members, especially tenured faculty, join any kind of a team, they're entering a situation where they are sure to feel anxiety about knowing what they're doing, they're put into a position where they may suddenly find that they are not necessarily the experts anymore. Moreover, in a collaboration like the one I attempted, such things can only compound the anxieties that a faculty member must already have about "coverage" (Davis 47)

It seems to me now that the clash between the subtle disciplinary hierarchies each of us unconsciously adopted were at the root of all these problems. I presumed a disciplinary hierarchy that set writing at the very least equal to the substance of the course's engineering content, while my colleague presumed a hierarchy which subordinated writing to that content. Indeed, Davis contends that such hierarchical mismatches are often intrinsic to what he would term a "cross-disciplinary" approach, as Davis defines the term, *cross-disciplinary* "refers to efforts to view one discipline from the perspective of another, often subordinating the phenomena from one discipline to the other" (4). Writing *Across* the Curriculum programs can too easily, and unknowingly, adopt a cross-disciplinary approach, certainly my rather arrogant determination to "engineer" CEAS courses as I thought best reflects such unexamined presumptions on my part. In addition, such a presumption becomes an immovable obstacle to change when it bumps up against someone else's hierarchical assumptions, as in the case of my colleague and I. Significantly, Davis observes that there is usually "little effort to integrate and no intent to generate a new subject or paradigm"

in cross-disciplinary teams (4). My collaboration was not focused on creating a new subject, rather, we were each of us intent on conserving and imposing on the course as much as possible, our own distinct and separate disciplines.

Yet WAC strives not to separate, but to integrate the discipline of writing with other disciplines. Indeed, Toby Fulwiler has noted that successful WAC programs "run deep into the center of the curriculum," in other words, they strive for *interdisciplinarity* rather than *cross-disciplinarity* (64). Close collaboration between disciplines is the only way to establish the faculty community and collegiality which for Fulwiler is the "single most important dimension" of a WAC program--an objective that Fulwiler speculates "few programs" actually, in his words, "put up fronts" (65-66). The kind of collaboration which produces Fulwiler's "community of scholars" also produces, according to Davis, a high level of "content integration"--a synthesis of disciplines which is inherent in interdisciplinary work. Davis notes that "[i]nterdisciplinary courses involve efforts, at least to some degree, to bring about mutual integration o[f] organizing concepts and methodologies" (5). According to Davis, content integration easily becomes a system of trade-offs, and if team members retain presumptions about hierarchical orders of their discreet disciplines, integration can be very low-level, if it is achieved at all. Consequently, collaboration is also low-level, and the vision of community inevitably fades. To achieve high levels of content integration, then, Davis contends that "faculty will be obliged to invent a new subject, not just present the old subject in a different form" (48).

I think that interdisciplinarity is clearly the direction that WAC programs must consciously pursue; we must work in close collaboration with other disciplines to create new subjects and paradigms which breach the walls that have built up between the study of writing instruction and

other academic fields. Without a doubt, this will require all of us to learn as well as to teach. Arenas of faculty collaboration must move beyond the workshop format if we want to form a real community of scholars, a team of interdisciplinary teachers and learners.

Notes

1. This paper was originally presented at the March 1996 Conference on College Composition and Communication, in Milwaukee, Wisconsin.

2. Strenski observes that research universities in general foster an "unexamined epistemology [which] is profoundly hostile to WAC promoted as a means of improving student learning" (35). Furthermore, she argues that recognizing and confronting the existence of this epistemology "is the first step in countering it and thereby preparing the way for and protecting any fledgling WAC program" (35-36).

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